

AMENDMENTS

In the Claims:

This listing of claims replaces all prior versions, and listings, of claims in the application.

1. (Currently Amended) A method of compensating for differences between an applied DC link voltage and a predetermined DC link voltage in an electrical machine comprising a rotor, at least one phase winding, and a controller configured to energize the phase winding in dependence on an angular position of the rotor, wherein the controller comprises a memory storing a voltage compensation map comprising a plurality of correction factors, the method comprising:

measuring the applied DC link voltage; ~~and~~

obtaining a correction factor by addressing the voltage compensation map using the applied DC link voltage; and

applying ~~a predetermined~~ the obtained correction factor to the angular position of energization of the phase winding ~~in dependence on the value of the applied DC link voltage.~~

2. (Canceled)

3. (Currently Amended) A method as claimed in claim 1 ~~or~~ 2, in which the applied DC link voltage is measured periodically.

4. (Currently Amended) A method as claimed in claim 1 ~~or~~ 2, in which the applied DC link voltage is measured when the machine is started.

5. (Currently Amended) A method as claimed in claim 1 ~~or~~ 2, further comprising measuring the applied DC link voltage when the machine is connected to a power supply but before the machine is switched on and applying ~~a predetermined~~ the obtained correction factor to the angular position of energization of the phase winding on starting the machine, ~~in dependence on the value of the measured DC link voltage.~~

6. (Currently Amended) A method as claimed in claim 1 ~~or~~ 2, further comprising deriving an average value for the applied DC link voltage at the measurement.

7. (Original) A method as claimed in claim 6, in which the step of deriving the average value includes applying a filter to the applied DC link voltage.

8. (Currently Amended) A method of controlling an electrical machine, including the method of compensating for differences between ~~the~~ an applied DC link voltage and a predetermined DC link voltage as claimed in claim 1 ~~or~~ 2.

9. (Currently Amended) A controller for an electrical machine, wherein the electrical machine ~~comprising~~ comprises a rotor and at least one phase winding and the controller comprises a memory storing a voltage compensation map comprising a plurality of correction factors, the controller being configured to:

energize the phase winding in dependence on an angular position of the rotor;

obtain a correction factor by addressing the voltage compensation map using a value of an applied DC link voltage; and to

apply, on application of a DC link voltage, a predetermined ~~the~~ obtained correction factor to the angular position of energization of the phase winding ~~in dependence on the value of the applied DC link voltage~~.

10. (Canceled)

11. (Currently Amended) A controller as claimed in claim ~~10~~ 9, in which the memory ~~further~~ comprises a predetermined advance angle map representing the energization of the phase winding with respect to the angular position of the rotor over a range of rotor speeds.

12. (Previously Presented) A controller as claimed in claim 11, in which the memory further comprises an angle correction factor to be applied to a predetermined portion of the predetermined advance angle map, which correction factor relates to the difference between the measured input power and a predetermined power.

13. (Currently Amended) An electrical machine incorporating a controller as claimed in any one of claims 9, 11, and ~~to~~ 12.

14. (Original) An electrical machine as claimed in claim 13, in the form of a switched reluctance motor.

15. (Previously Presented) A cleaning appliance incorporating an electrical machine as claimed in claim 13.

16-17. (Canceled)

18. (Previously Presented) A method as claimed in claim 5, further comprising deriving an average value for the applied DC link voltage at the measurement.

19. (Previously Presented) A method of controlling an electrical machine, including the method of compensating for differences between the applied DC link voltage and a predetermined DC link voltage as claimed in claim 5.

20. (Previously Presented) A cleaning appliance comprising the switched reluctance motor of claim 14.